Substitute for Form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

O I P E JC01 MAR 15 2004 PATENT & TRADEMARK OFFICE

Complete if Known	
Application Number	09/895,787
Filing Date	06/30/2001
First Named Inventor:	Emir Gurer
Art Unit	1752
Examiner Name	Gilliam, Barbara Lee
Attorney Docket Number	6601P019X3

Sheet 1 of 3

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
BG		US- 3,198,657	08-03-1965	Kimball et al.	
BG		US- 4,551,355	11-05-1985	Ericson et al.	
BG		US- 5,985,363	11-16-1999	Shiau et al.	
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FOREIGN PATENT DOCUMENTS

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BG		JP 3-22428 A	01-30-1991	NEC Kyushu Ltd.		X
BG		JP 4-332116 A	11-19-1992	Mitsubishi Electric Corp.		X
BG		JP 8-168715 A	07-02-1996	Dainippon Screen Mfg. Co. Ltd.		X
BG		JP 63-301520 A	12-08-1988	NEC Corp.		X

Examiner Signature	Barbara Gilliam	Date Considered	6/10/04

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U.S. PATENT & TRADEMARK OFFICE MAR 15 2004

Sheet 2 of 3

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
BG		BAGEN, SUSAN, ET AL., Extrusion Coating of Polymer Films for Low-Cost Flat Panel Display Manufacturing, 1996 Display Manufacturing Technology Conference, Digest of Technical Papers, pgs. 35-36 (1996).	
		BIXLER, NATHAN EPHRAIM, Stability Of A Coating Flow, PhD Dissertation submitted to the University of Minnesota, June 1982.	
		BORNSIDE, DAVID, E., ET AL., The effects of gas phase convection on mass transfer in spin coating, Journal of Applied Physics, Vol. 73, No. 2, January 15, 1993, pgs. 585-600, © 1993 American Institute of Physics.	
		BORNSIDE, D.E., ET AL., On the Modeling of Spin Coating, Journal of Imaging Technology, Volume 13, Number 4, August 1987, pgs. 122-130, © 1987, SPSE – The Society for Imaging Science and Technology.	
		COHEN, ET AL., Modern Coating And Drying Technology, Chapter 4, Premetered Coating, pgs. 117-167, VCH Publishers, Inc., (1992).	
		EMSLIE, ALFRED G., ET AL., Flow of a Viscous Liquid on a Rotating Disk, Journal Of Applied Physics, Vol. 29, No. 5, May 1958, pgs. 858-862.	
		FRAYSSE, NATHALIE, ET AL., An experimental study of rivulet instabilities in centrifugal spin coating of viscous Newtonian and non-Newtonian fluids, Physics of Fluids, Vol. 6, No. 4, April 1994, pgs. 1491-1504, © 1994 American Institute of Physics.	
		GUTOFF, EDGAR B, ET AL., Coating and Drying Defects, Troubleshooting Operating Problems, Chapter V, pgs. 96-138, A Wiley-Interscience Publication, John Wiley & Sons, New York Chichester Brisbane Toronto Singapore (1992).	
		GUTOFF, EDGAR B., Simplified Design of Coating Die Internals, Journal Of Imaging Science And Technology, Volume 37, Number 6, November/December 1993, pgs. 615-627, © 1993, I S & T – The Society for Imaging Science and Technology.	
		HAFIZI, B., Effects of carrier and dispersion on propagation of a directed electromagnetic pulse, Journal of Applied Physics, Vol. 73, No. 2, January 15, 1993, pgs. 513-521, © 1993 American Institute of Physics.	
		HIGGINS, B.G., ET AL., Capillary Pressure And Viscous Pressure Drop Set Bounds On Coating Bead Operability, Chemical Engineering Science, Vol. 35, pgs. 673-682, Pergamon Press Ltd. 1980, Printed in Great Britain.	

Examiner Signature	B. L. Gilliam	Date Considered	6/10/04

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BG		LAWRENCE, C.J., The mechanics of spin coating of polymer films, Physics of Fluids, Vol. 31, No. 10, October 1988, pgs. 2786-2795, © 1988 American Institute of Physics.	
		LEE, KWONG-YANG, ET AL., Minimum Wet Thickness In Extrusion Slot Coating, Chemical Engineering Science, Vol. 47, No. 7, pgs. 1703-1713, © 1992 Pergamon Press plc, Printed in Great Britain.	
		MEYERHOFER, DIETRICH, Characteristics of resist films produced by spinning, Journal of Applied Physics, Vol. 49, No. 7, July 1978, pgs. 3993-3997, © 1978 American Institute of Physics.	
		MUES, W., ET AL., Observation of a Dynamic Wetting Process Using Laser-Dopper Velocimetry, AIChE Journal, Vol. 35, No. 9, September 1989, pgs. 1521-1526.	
		RUSCHAK, KENNETH J., Limiting Flow In A Pre-Metered Coating Device, Chemical Engineering Science, 1976, Vol. 31, pgs. 1057-1060, Pergamon Press. Printed in Great Britain.	
		SUKANEK, PETER C., Spin Coating, Journal of Imaging Technology, Volume 11, Number 4, August 1985, pgs. 184-190, © 1985, Society of Photographic Scientists and Engineers.	
		SARTOR, LUIGI, Slot coating: Fluid mechanics And die design, PhD Dissertation submitted to the University of Minnesota, September 1990.	

Examiner Signature	Barbara L. Gilliam	Date Considered	4/10/04

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MAR 14 2005
PATENT & TRADEMARK OFFICE

Complete if Known	
Application Number	09/895,787
Filing Date	June 30, 2001
First Named Inventor	Gurer Emir
Art Unit	1752
Examiner Name	Gilliam, Barbara Lee
Attorney Docket Number	006601.P019X3

Sheet 1 of 4

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US-			
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BG		JP 05-021306	01-29-1993	Cannon Sales Co Inc.		
		JP 02-098126	04-10-1990	Oki Electric Ind Co Ltd		
		JP 04-361524	12-15-1992	Toshiba Corp		
		JP 61-02925	06-14-1984	Toyoda Autom Loom Works Ltd		
BG		JP 63-032921	02-12-1988	Daikin Ind Ltd		

Examiner Signature	B. L. Gilliam	Date Considered	10/1/05

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OIPE JC99 MAR 14 2005 PATENT & TRADEMARK OFFICE

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Attorney Docket Number	006601.P019X3

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BG		JP 05-166712	07-02-1993	Dainippon Screen Mfg Co Ltd		
BG		JP 62-225269	10-03-1987	Hitachi Ltd Hitachi Tobu, Semiconductor Ltd		
BG		JP 05-141058	06-08-1993	Sekisui Chem Co Ltd		

Examiner Signature	B. L. Gilliam	Date Considered	10/1/05

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BG		J. VAN SCHOOT et al., "The Mask Error: Causes and Implications for Process Latitude" (Part of the SPIE Conference on Optical Microlithography XII), March 1999, p. 250-260, SPIE Volume 3679, Santa Clara, CA.	
		F.M. SCHELLENBERG et al., "Impact of Mask Error on Full Chip Error Budgets"; (Part of the SPIE Conference on Optical Microlithography XII), March 1999, p. 261-275, SPIE Volume 3679, Santa Clara, CA.	
		M.S. KRISHNA et al., "Characterization of Advanced DUV PhotoResists", (Part of the SPIE Conference on Advances in Resist Technology and Processing XVI), March 1999, p. 607-614, SPIE Volume 3678, Santa Clara, CA.	
		J. LEWELLEN et al., "Effect of PEB Temperature Profile on CD and DUV Resists", (Part of the SPIE Conference on Process, Equipment, and Materials Control in Integrated Circuit Manufacturing V), March 1999, p. 45-54, SPIE Volume 3882, Santa Clara, CA.	
		D.E. BORNSIDE et al., "Spin Coating: One-dimensional mode", J. Appl. Phys. 66(11), December 1989, p. 5185-5193, American Institute of Physics.	
		R. KOBAYASHI et al., "Contributed Papers – Spiral Vortices in boundary Layer Transition Regime on a Rotating Disk" Acta Mechanica, 1980, p. 35, 71-82 (14 pages total), Volume 35/1-2, Springer-Verlag, Wien, New York.	
		R.M. CROWELL, "Determining Photoresist Coat Sensitivities of 300 mm Wafers", February 1998, p. 414-419 (7 pages total) SPIE Volume 3331, Santa Clara, CA.	
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		L. PETERS, "Solving the Integration Challenges of Low-K Dielectrics", November 1999, p. 56-64 (11 pages total), Semiconductor International, Volume 22, Number 13.	
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		J. DERKSEN, "A New Coating Method for Semiconductor Lithography: Fluid Layer Overlap in Extrusion-Spin Coating" , June 1997, (67 pages total), Massachusetts Institute of Technology.	

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BLG		S. HAN, Modeling and Analysis of Extrusion-Spin Coating: An Efficient and Deterministic Photoresist Coating Method of Microlithography, February 2001, 179 pages, Massachusetts Institute of Technology.	

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